WHAT IS CLAIMED IS:

1. A method of making glycosides using a non-cryogenic process comprising the steps of:

(a) lithiating an aromatic reactant having a leaving group using a lithium reagent in a first microreactor under non-cryogenic conditions to form a lithiated anion species; and

(b) coupling the lithiated anion species with a carbonyl substituted reactant to form a glycoside.

2. The method according to claim 1, wherein said lithiating step is performed at a temperature of from about -10°C to about 20°C.

3. The method according to claim 2, wherein said lithiating step is performed at a temperature of from about -10°C to about 5°C.

4. The method according to claim 1, wherein the residence time in said first microreactor is from about 2 seconds to about 3 seconds.

5. The method according to claim 1, wherein said aromatic reactant is a halide.

6. The method according to claim 1, where said lithium reagent is selected from the group consisting of n-BuLi and t-BuLi.

7. The method according to claim 1, wherein a yield of said glycoside is greater than about 80%.

8. The method according to claim 1, wherein said coupling step is performed under cryogenic conditions.

9. The method according to claim 8, wherein said coupling step is performed at a temperature of less than about -80°C.

10. The method according to claim 1, wherein said coupling step is performed in a second microreactor under non-cryogenic conditions.

11. The method according to claim 10, wherein said coupling step is performed at a temperature of from about -20°C to about 20°C.

12. The method according to claim 11, wherein said coupling step is performed at a temperature of about -10°C.

13. The method according to claim 10, wherein the residence time in said second microreactor is from about 2 seconds to about 3 seconds.

14. The method according to claim 10, wherein a yield of said glycoside is greater than about 70%.

15. A method of making glycosides using a non-cryogenic process comprising the steps of:

(a) lithiating an aromatic reactant having a leaving group using a lithium reagent to form a lithiated anion species; and

(b) coupling the lithiated anion species with a carbonyl substituted reactant in a microreactor under non-cryogenic conditions to form a glycoside.

16. The method according to claim 15, wherein said coupling step is performed at a temperature of from about -10°C to about 20°C.

17. The method according to claim 15, wherein said coupling step is performed at a temperature of from about -10°C to about 5°C.

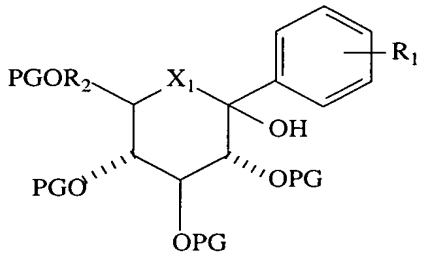
18. The method according to claim 15, wherein the residence time in said microreactor is from about 2 seconds to about 3 seconds.

19. The method according to claim 15, wherein said lithiating step is performed under cryogenic conditions.

20. The method according to claim 1, further comprising the step of :
(c) deprotecting the glycoside.

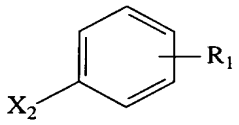
21. A glycoside formed by the method of claim 1.

22. A method of making a glycoside having the general structural formula [I]:



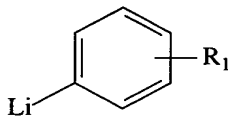
[I]

wherein: R_1 is hydrogen, NO_2, OR_4, a halogen, or a substituted or non-substituted alkyl, aryl, or heterocycle; R_2 is a substituted or non-substituted alkyl group, wherein R_4 is a substituted or non-substituted alkyl or aryl; X_1 is a heteroatom; and PG is a protective group,
the method including the steps of: (a) reacting an aromatic reactant having general structural formula [II]:



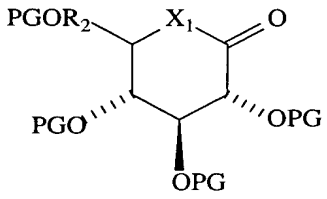
[II]

wherein: R_1 is as defined previously and X_2 is a leaving group, in a first microreactor with an organo lithium reagent to form a lithiated anion species having general structural formula [III]:



[III]

wherein R_1 is as defined previously, and (b) coupling the lithiated anion species [III] with a carbonyl substituted compound having general structural formula [IV]:



[IV]

wherein: R_2, X_1 and PG are as described previously, to form the compound having general structural formula [I].

23. The method of claim 22 wherein the lithiating step is performed at a temperature of from about -10°C to about 20°C.

24. The method of claim 23 wherein the coupling step is performed in a second microreactor under con-cryogenic conditions.

25. The method of claim 23 wherein the lithiating step is conducted in a solvent selected from THF/toluene or THF/heptane.

26. The method of claim 23 wherein the coupling step is performed in a second microreactor under non-cryogenic conditions.

27. The method of claim 26 wherein the coupling step is performed at a temperature of from about -20°C to about 20°C.